BA_S003 Operation Manual





Product Group: Solenoid valve Product type:	MF52 / MF32	EN
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To ensure functionality and your own safety, please read these operating instructions carefully before you begin the installation. If you have any further questions, please contact:

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1. Device description

The in-line solenoid valve, series MF52... / MF32... is intended to be used to control single and double acting, pneumatic swivel drives or cylinders with compressed air. It is not intended for use with liquids or gases.

The solenoid valves, series MF52... do have a 5/2 way function and are intended to be used to control double acting, pneumatic swivel drives or cylinders. The solenoid valves, series MF32... do have a 3/2 way function and are intended to be used to control single acting, pneumatic swivel drives or cylinders.

2. Labeling and intended use

The solenoid valve, type MF52... / MF32... must not be used in an area subject to explosion hazards. For use in areas subject to explosion hazards, a different version of the valve and its accompanying operating instructions is required. These operating instructions are to be used with the trip coil manufacturer's operating instructions. The trip coil manufacturer's operating instructions relate to the electrical part of the device and the operation instructions in this manual relate to the non-electrical part. The label on the valve body varies according to function and design.

On the solenoid valve sticker you will find the item number, name and complete address of the manufacturer, the company logo, the CE symbol, the year of manufacture, the pneumatic circuit diagram, the numbering of the connections and the solenoid valve data.

3. Safe installation

To avoid mistakes, only a specialist is permitted to set up, connect and put the devices into operation. Always observe the following safety instructions before set up:



IF you do not observe the safety instructions in these operational instructions or if you use or handle the device improperly, our staff cannot be held liable. Furthermore your warranty for the device and its accessory components will be void!

- ${}^{\mathscr{T}}$ When removing packaging, ensure that no particles of dirt enter the device.
- $\ensuremath{\mathscr{T}}$ Check the label to see whether the device is suitable for your application.
- Observe national regulations and conditions, the relevant set up requirements and the
- general rules of the trade.
 Take suitable measures to prevent unintentional activation of or improper interference with the device.
- Ensure that the cables and cannot become detached under pressure.
- The Ensure that the connecting cable is sufficiently relieved of strain or fix it securely.
- Actively protect the device and cable against damage.
- Avoid bending the air supply cord too sharply.
- Do not exceed an outer diameter of 20mm for tubes and bundles of cables.
- *T* Install the device so that it is accessible for regular cleaning.
- The Before installation, ensure that all machines/systems meet the EMV guidelines.
- Avoid the build up of static in peripheral equipment. Connect all conductive metal parts including accessories to calculate the potential balance.
- The observe the trip coil manufacturer's operation instructions for electrical installation.
- The device must only be used in a finished assembled condition.



Do not seal unused openings! The valve would then no longer function properly. The piston in the valve body will no longer be able to move after a few circuits because of the accumulation of condensed air. Instead, use suitable air-permeable mufflers to prevent dirt from getting inside the valve.

4. Assembly

The solenoid valves, series MF52... / MF32... can be fixed with standard DIN screws to any solid ground with the matching drill pattern. It is not possible and non-functional to mount these solenoid valves directly on pneumatic NAMUR swivel drive motors.

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Emergency manual override

Ensure that the emergency manual override in set to the "0" off position. Otherwise the valve cannot be controlled via the coil. It will then not work. (Images 1+2)



5. Dismantling

When dismantling, observe the instructions from chapter 3.

- 1. Ensure that there is no tension or compressed air in the valve.
- 2. Disconnect all cables from the valve
- 3. Loosen the 2 socket screws and remove the valve from your device.

6. Air supplies

The air supply should always be sourced via connection no. 1.

MF52...:

Connections 3 and 5 are for exhaust air and must never be sealed with air-permeable components. However, we recommend furnishing connections 3 and 5 with a silencer (SDK ¼"), an exhaust check valve (ERV-G1/4) or an exhaust air restrictor (DRSD ¼") to prevent dirt from getting inside the valve and to reduce the noise of the escaping compressed air. Connections 2 and 4 are to control the double acting pneumatic swivel drive motor or cylinder.

MF32...:

Connection 3 is for exhaust air and must never be sealed with air-permeable components. However, we recommend furnishing connection 3 with a silencer (SDK ¼"), an exhaust check valve (ERV-G1/4) or an exhaust air restrictor (DRSD ¼") to prevent dirt from getting inside the valve and to reduce the noise of the escaping compressed air. Connection 2 is to control the single acting pneumatic swivel drive motor or cylinder.



Complaints on the grounds of dirt in the valve are not the fault of the manufacturer and therefore not covered by warranty!

7. Operation

Only operate the valve with clean oiled or non-oiled compressed air with an ISO 8573-1 quality level of 5. Other cleaning methods are not considered to be suitable. If you use oiled compressed air you should remove this using suitable measures (exhaust). The temperature increase of the device depends on the means used and on the surface temperature of the valve magnet. Method and ambient temperature range should be from -20°C to +50°C. For temperatures under 0°C, you must use dry air. Permitted operating pressure: 2 - 10 bar

8. Maintenance

Regularly check that the device functions flawlessly. At least every 6 months or after a maximum of 5 million switch cycles.



9. Malfunctions

If a malfunction occurs, check the electric and pneumatic line connections, the supply voltage and the operational pressure. Rectify any possible faults. If this does not rectify the malfunction, be sure the there is no pressure on the device and disconnect the device from the power supply voltage. Consult an authorised and trained specialist member of the manufacturer's staff.